

ABSTRACT

To provide a fuel cell power generation system which has no assist combustion system and thus is simple in structure and a method for starting the fuel cell power generation system and controlling the operation of the fuel cell power generation system, in order to provide a fuel cell power generation system which operates stably with a high reliability.

In a fuel cell power generation system having a reforming section 5 for reforming a raw material fuel m to produce reformat r ; a combustion section 4 for burning the raw material fuel to heat the reforming section; carbon monoxide reduction section 6 and 7 for reducing the content of carbon monoxide in the reformat to produce carbon monoxide reduced gas g ; and a fuel cell 30 which uses the carbon monoxide reduced gas as fuel gas, the raw material fuel is supplied to the combustion section to heat the reforming section to a predetermined temperature, supply of the raw material fuel to the combustion section is stopped, the raw material fuel is supplied to the reforming section to produce reformat, the reformat is introduced into the carbon monoxide reduction section to heat the carbon monoxide reduction section, and the carbon monoxide reduced gas generated in the carbon monoxide reduction section is introduced into the fuel cell to generate electric power.